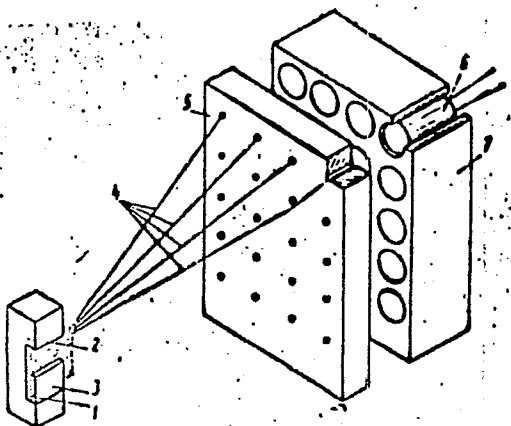


ACC NR: AP6012869



representation on tape, photographic paper, etc. The dimensions of the objects to be measured may vary within wide tolerances, with the accuracy of the measurement depending on the diameter of the light-guides used. This diameter is in turn limited by diffraction on the edges of the object. The electronic circuitry is simple and reliable in operation, and may be used for automatic rejection of off-sized items.

Fig. 2. Diagram of light-receiver

1 - light receiver; 2 - band; 3 - epoxy facing with aluminum powder; 4 - light-guides; 5 - guide branch plate; 6 - photoelectric converter; 7 - converter holder

CODE: 13,14/ SUBM DATE: none

SUB CODE: 13,14/ SUBM DATE: none

Card 3/3

GANDZYUK, M.P. [Handziuk, M.P.]; STABNIKOV, V.M.; SHALDENKO, D.K.

Air agitation for the mixing of graded products. Khar.prom.
no.1:53-54 Ja-Mr '62. (MIRA 15:8)

1. Kafedra protsessov i apparatury Kiyevskogo tekhnologicheskogo
instituta pishchevoy promyshlennosti (for Gandzyuk, Stabnikov).
(Distillation)

STABNIKOV, V.N. Prinsipal uchastnye BORODYANSKIY, M.Ya., doktor
tekhn. nauk; DOBROSERDOV, L.L., doktor tekhn. nauk,
retsensent;

[Rectification apparatus; design and construction] Rekti-
fikatsionnye apparaty; raschet i konstruirovaniye. Moskva,
Mashinostroenie, 1965. 355 p. (MIRA 18:7)

1ST AND 2ND ORDER										PROCESSES AND PROPERTIES INDEX										3RD AND 4TH ORDER									
<p><i>Ca</i></p> <p>Determination of the boiling temperature of solutions according to the law of Raoult. V. STANNIKOV. KAZANET 5, 2110-14(1933). -- A discussion CHAR BLANC</p>																													
<p>ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																													

Some changes in the construction of absorption columns for the absorption of oxides of nitrogen. V. N. Stabnikov and A. Shcherbakov. *Khim. Mashinostroyeniye* 6, No. 5, 26 7 (1967); *Chem. Zvesti.* 1968, 11, 1812. The advantages of the use of cooling coils in the bottom of absorption columns for oxides of N are explained and the most satisfactory arrangement of such coils is given. M. G. M.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
<p><i>ca</i></p> <p>PROCESSES AND PROPERTIES INDEX</p> <p>2</p> <p>The motion of a current of gas in a viscous liquid. V. N. Stabnikov. <i>Khim. Mashinostroyeniya</i> 7, No. 1, 6-15 (1958); <i>Chem. Zvezd.</i> 1958, II, 698.—The dimensions of the gas bubbles were detd. in relation to the flow in both water and castor oil. The gas entered the liquid in a horizontal and in a vertical direction through circular orifices of varying diam. The size of the bubbles was not proportional to the size of the orifice. The expanding of the bubbles immediately after their escape from the orifice was characteristic, especially with small orifices and high velocities of flow. M. G. Moore</p>																																																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM SOURCE</p> <p>FROM SOURCE</p> <p>FROM SOURCE</p>																																																			

177 AND 178 CODES

190 AND 191 CODES

PROCESSES AND PROPERTIES INDEX

C A

1

The performance of perforated plates in rectification columns. V. N. Stakulsky, *Trudy Vsesoyuz. Khim.-Tehn. Inst.* 5-8, 177-80 (1950); *Khim. Refrat. Zhur.* 1949, No. 7, 125; cf. C. A. 34, 4507^g.—For optimum performance, a plate thickness of 2-3 mm., diam. of openings in the plates 2-3 mm., distance between the openings 12-10 mm. and static height of liquid level 80 mm. are recommended.

W. R. Hays

ALU-ILA METALLURGICAL LITERATURE CLASSIFICATION

177 AND 178 CODES

190 AND 191 CODES

PROCESSES AND PROPERTIES INDEX

177 AND 178 CODES

190 AND 191 CODES

PROCESSES AND PROPERTIES INDEX

Effect of foam on entrainment in cap-plate columns.
V. N. Stepanov. *Khim. Mashinostroyeniye* 6, No. 6, 17-21 (1935).—The effect of foaming on entrainment was studied with cap-plate columns 200, 300 and 445 mm. high, 200 mm. in diam., and having 3 plates equipped with feed and draw-off pipes, the distances between the plates being 227, 237 and 300 mm. The upper plate contained water and the lower plate, through which air was blown, contained 1 N NaOH or 1 N NaOH + soap soln. The air speeds were 0.084-0.380 m./sec. Up to an air speed of 0.25 m./sec. the entrainment of foaming liquids was greater than for nonfoaming ones, but at higher speeds the reverse was true. The carry-off of foam also started at speeds higher than 0.25 m./sec. The results are given in tables and graphs. B. Z. Kamich

STANDARDIZATION PROBLEMS IN DESIGNING MASH STILL.																									
V. Stabnikov. <i>Sputo-Predchayaya Prom.</i> 10, No. 2, 11-19 (1960). The work of Pravy and Baker (C. A. 31, 82309) on fractionating columns is critically discussed with respect to columns with 13, 14 to 16 and 17 or more plates on the basis of capacity and vapor velocity data for the various sizes. Requisites for max. capacity are discussed.																									
Julian F. Smith																									
ASAC SLA METALLURGICAL LITERATURE CLASSIFICATION																									

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>Classification column with perforated plates. V. N. No. 2, 9-11 H. Z. Kamsh (1960); cf. C. A. 34, 911.</p>																			
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

COMMON ELEMENTS		COMMON VARIABLE MODELS	
<p>1ST AND 2ND ORDERS</p> <p>PROCESSING AND PROPERTIES INDEX</p> <p>Economical vapor-flow rates in mash fractionators. V. Stalnikov. <i>Spirto-Vodochnaya Prom.</i> 17, No. 10/11, 15-17 (1910).--Fractionator efficiency is improved by making the column narrower and spacing the plates farther apart, i. e., by an increase in rate of vapor flow. Stills built on this principle are cheaper both in first cost and in upkeep than wider stills with closer plate spacing.</p> <p>Julian F. Smith</p>		<p>1ST AND 2ND ORDERS</p> <p>1ST AND 2ND ORDERS</p>	
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>		<p>6-SETTLEMENT</p>	
<p>1ST AND 2ND ORDERS</p>		<p>1ST AND 2ND ORDERS</p>	
<p>1ST AND 2ND ORDERS</p>		<p>1ST AND 2ND ORDERS</p>	

STABNIKOV, V.M., professor; KHARIN, S.Ye., professor; MASLOVA, Ye.F.,
redaktor; KISINA, Ye.I., tekhnicheskiiy redaktor

[Theoretical bases of the distillation and rectification of alcohol;
theory of the operation of distillation apparatus and of thermal
calculations] Teoreticheskie osnovy peregonki i rektifikatsii spirta;
teoriia raboty peregonnykh apparatov i ikh teplovoi raschet. Moskva,
Pishchepromizdat, 1951. 218 p. (MLFA 10:1)
(Distillation)

PA 193T22

USSR/Chemistry (Engineering) - Nov/Dec 51
Distillation

"Academician D. P. Kononov, Originator of the
Theory of Distillation," V. N. Stabnikov, G. I.
Fertman, Moscow

"Voprosy Khim" Vol XX, No 6, pp 776-783

Reviews the work of D. P. Kononov, who published a theory of distn which explained the existence of const-boiling binary mixts by establishing that the vapor compn becomes the same as that of the liquid, and that points of equal compn occur either at minima or maxima of the

193T22

USSR/Chemistry (Engineering) - Nov/Dec 51
Distillation (Contd)

distn curve.. Deplores that no credit was given to Kononov either by C. S. Robinson and E. R. Gilliland (USA) or E. Kirschbaum (Germany), authors of std handbooks on distn, although his work became well known and was repeatedly republished both in Russia and abroad.

193T22

STABNIKOV, V. N.

STABNIKOV, V.N.

POPOV, V.I.; DOBROSERDOV, L.L.; STABNIKOV, V.N.; ANDREYEV, K.P.;
ZNAMENSKIY, G.M., professor, retsenzent; SKOBLO, D.I., kandi-
dat tekhnicheskikh nauk, retsenzent; SEREGIN, P.V., kandidat
tekhnicheskikh nauk, retsenzent; IZRAILEVICH, L.A., inzhener,
retsenzent; MASLOVA, Ye.F., redaktor; DUBOVKINA, N.A., tekhnicheskiiy redaktor.

[Technological equipment for fermentation industries] Tekhnologicheskoe oborudovanie brodil'nykh proizvodstv. Moskva, Pishchepromizdat, 1953. 515 p. (MLRA 7:8)

(Distilling industries) (Brewing industries)

AID P - 3836

Subject : USSR/Chemistry

Card 1/1 Pub. 78 - 24/25

Author : Stabnikov, V.

Title : Letter to the editor

Periodical : The author refers to the article of Ye. Ya. Susanov
"Kinetics of fractional distillation" published in this
journal, #9, 1954, and points out some of Susanov's
erroneous assertions.

Institution : None

Submitted : No

STABNIKOV, V.N., professor.

"Course on the theory of distillation and rectification." S.A. Bagaturov. Reviewed by V.N. Stabnikov. Spirt. prom. 20 no. 4:42 '54.
(Bagaturov, S.A.) (Distillation) (MLRA 7:12)

STABNIKOY, V. N.

Klimovskii, D. N., and Stabnikov, V. N.: Tekhnologiya
Vspirta (Alcohol Technology). 2nd. ed. Moscow: *Pub. med*
chepranizdat, 1955. 444 pp.

12

5720.11200, 0.00.
USSR/Processes and Equipment for Chemical Industries--
Processes and apparatus for chemical technology.

K-1

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10614

Author : Stabnikov, V. N.

Inst : Not given

Title : The Theoretical Plate and Mass Transfer

Orig Pub: Khim. prom-st, 1955, No 7, 39-41

Abstract: A number of critical comments are made concerning the article by A. N. Planovskiy and A. G. Kasatkin (see preceding abstract). The author points out that the concepts of the theoretical plate (TP) and of the plate efficiency of actual plates have characteristic definite physical meaning, that the utilization of these concepts is practical and convenient, even though the transition from the number of TP to the number of actual plates requires a knowledge of the kinetic characteristics of the column. At the present time it is not possible as yet to obtain a rigorous derivation of the plate efficiency

Card 1/2

USSR/Processes and Equipment for Chemical Industries-- K-1
Processes and apparatus for chemical technology.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10614

Abstract: or a correct value for the height equivalent to a unit mass transfer. The solution of this problem requires the accumulation of further experimental data, their systematization and generalization.

Card 2/2

USSR/Chemistry - Chemical engineering, Distillation

FD-3366

Card 1/1 Pub. 50 - 10/20

Author : Prof Stabnikov, V. N.

Title : The theoretical plate and transfer units

Periodical : Khim. prom. No 7, 423-425, Oct-Nov, 1955

Abstract : In commenting on the article "Methods of Expressing the Motive Power of Diffusion Processes" by A. N. Planovskiy and A. G. Kasatkin, Khim. Prom. No 9, p 336, 1953, the author disagrees with the suggestion that the concept of the theoretical plate be abandoned. He agrees, however, that using transfer units is of advantage, because the efficiency of both plate columns and filled columns can be evaluated on the same basis in this manner.

Institution : --

Submitted : --

KHARIN, S. Ye.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652810005-3"

"Steam reheating in the food industry." V.N.Stabnikov. Reviewed
by S.E.Kharin. Gidroliz. i lesokhim. prom. 8 no.2:31-32 '55.
(MLRA 8:10)

1. Professor Odesskogo tekhnologicheskogo instituta pishchevoy i
kholodil'noy promyshlennosti.
(Steam) (Food industry)

STABNIKOV, V. N.

Rectification of ethyl alcohol by use of a fractionation column. P. S. Tsvetkov and V. N. Stabnikov. *Trudy, Tekhnol. Inst. Pishchev. Prom. im. A. T. Artyukova* 16, 121-30(1958).—A fractionation column was described and the specification for the no. of theoretical plates necessary to rectify EtOH from mixts. was given. E. A. M.

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STABNIKOV, V. N.

The possibility of applying checkered columns for the distillation and rectification of alcohol. V. N. Stabnikov and P. S. Tsygankov. *Spirtoaya Prom.* 22, No. 2, 4-7 (1956). The distn. and rectification efficiency of an ordinary column contg. Cu plates was compared with that of a column contg. an annular checkerwork of cast iron or steel. These columns were satisfactory, thus economizing on Cu.

Werner Jacobson

Kiev Tech. Inst. Food Industry in Mikoyan

STABNIKOV, V. N.

3-5-24/38

AUTHOR: Stabnikov, V.N., Professor

TITLE: Ways of Developing Food Machine Building (Puti razvitiya pishchevogo mashinostroyeniya)

PERIODICAL: Vestnik vysshey shkoly, 1957, No 5, pp 65 - 66 (USSR)

ABSTRACT: The author reports on an inter-VUZ conference held at the end of last year at the Kiyev Technological Institute of the Food Industry dealing with the development of food machine-building in the Soviet Union. 95 representatives of 12 VUZes were present. Various reports were submitted by: I.G. Gritsyuk, Vice-Minister of Food Processing Industry, Ukrainian SSR; P.M. Selekho, Chief Engineer with Ukrprodmash (Main Administration for the Manufacture of Equipment for the Food Industry); Professor V.N. Stabnikov and Dotsents D.I. Skodlo, B.Yu. Brodyo, G.A. Preyssa and K.A. Bortnovskiy, all of the Kiyev Technological Institute of Food Industry; and by Professor M.N. Larin from the Moscow Technological Institute of the Food Industry. The conference expressed the necessity to create a special enterprise for the production and repair of pumps for the food industry and approved a resolution submitted by Ukrglavsakhar relating to the installation of a pump-test station at the Salivorkovskiy sugarcane factory. The author enumerates further reports made by: Dotsent V.I. Popov, of the

Card 1/2

3-5-24/38

Ways of Developing Food Machine Building

Leningrad Technological Institute of the Food Industry; Professor V.S. Martinovskiy and Dotsent L.Z. Mal'tser of the Odessa Technological Institute of Refrigeration and Food Industry; Dotsent G. E. Zaritskiy of the Krasnodar Institute of the Food Industry; members of the Leningrad Technological Institute of the Refrigeration Industry and the Moscow Technological Institute of the Meat and Dairy Industries; the Scientific Research Institute of Food Machine Building; the Institute of Mechanical Engineering of the Academy of Sciences, USSR; the All-Union Scientific Research Institute of the Confectionary Industry; the Central Institute of the Sugar Industry and others. The resolutions made during the conference concerned concrete suggestions relating to the coordination of vuzes, research institutes and the food machinebuilding industry. The Scientific Research Institute of Food Machine Building was appointed as the center of coordination. Suggestions were made relating to a special training plan and to the improvement of supply bases for vuzes. It was also stated that a closer connection between courses and diploma projects was necessary.

ASSOCIATION:

The Kiyev Technological Institute of Food Industry imeni A.I. Mikoyan (Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti imeni A.I. Mikoyana)

AVAILABLE:

Card 2/2

Library of Congress

SELEBNIKOV, V.N., doktor tekhnicheskikh nauk, professor.

Methods of reducing steam consumption during distillation. Prom.
energ. 12 no.5:14-18 My '57. (MLRA 10:6)
(Distillation)

STABNIKOV, V.N.; MELENT'YEVA, I.S.

Efficiency of destillation and rectification apparatus used in
the distilling industry. Trudy KTIPP no.17:137-143 '57.
(MIRA 13:1)

(Distillation apparatus)

STABNIKOV, V.N.

Proceedings of the interuniversity scientific and technological conference "Ways of Expanding Food Production Machinery Manufacture." Trudy KTIPP no.17:251-256 '57. (MIRA 13:1)
(Food industry--Equipment and supplies)

STABNIKOV, V.N.

✓ Tubular rectification column [for industrial alcohol].
V. N. Stabnikov and A. P. Nikoliev. *Spirtoaya Prom.*
23, No. 1, 4-6(1951).--App. A rectification column con-
sisting of a bundle of tubes is described. W. L. Graham.

STABNIKOV, V.N.; ROYTER, I.M.

"Trudy" of the Kiev branch of the All-Union Scientific-Research Institute of the Alcohol Industry. Spirt. prom. 23 no.2:41-43 '57.
(Alcohol) (MLRA 10:4)

FEDOROV, P.D.; STABNIKOV, V.N.; GLYBIN, I.P.; BELYAVSKIY, V.V.; BOYCHENKO,
N.G.; BUZYKIN, N.A.; GOLOVIN, P.V.; DEMCHUK, A.P.; ZHURA, K.D.;
KORCHINSKIY, A.I.; KURILENKO, O.D.; KLIMKO, N.G.; LITVAK, I.M.;
MAL'TSEV, P.M.; NIKOLAYCHUK, I.M.; NAUMOV, A.L.; POPOV, V.D.; RED'KO,
F.A.; SKOBLO, D.I.; KHRISTENKO, M.M.; TSYGANKOV, P.S.; SHLIPCHENKO,
Z.S.; SHVETSOV, P.D.

Gleb Mikhailovich Znamenskiy; obituary. Sakh. prom. 31 no.12:68
D '57. (MIRA 11:1)

(Znamenskiy, Gleb Mikhailovich, 1901-1957)

STABNIKOV, V.N.

Training diplomaed chemical engineers for the food industry of
the German Democratic Republic. Izv. vys. ucheb. zav.; pishch.
tekhn. no.1:122-125 '58. (MIRA 11:8)
(Germany, East—Chemistry, Technical—Study and teaching)

STABNIKOV, V.N.

Twenty-fourth conference of the Kiev Technological Institute of
the Food Industry. Izv. vys. ucheb. zav.; pishch. tekhn. no.1:
126-128 '58. (MIRA 11:8)

(Food industry—Congresses)

STABNIKOV, V.N.; NIKOLAYEV, A.P.

Purification in pipe columns. Izv. vys. ucheb. zav.: pishch.
tekhn. no.3:128-131 '58. (MIRA 11:9)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
Kafedra protsessov i aparatov.
(Distillation)

STABNIKOV, V.N.

History of the main stages in the development of apparatus for
alcohol distillation and rectification. Trudy KTIPP no.19:101-117
'58. (MIRA 12:12)

(Distillation apparatus)

STABIIKOV, V.N.

Training of mechanical engineers for the chemical industry
in the Dresden Higher Technical Institute (GDR). Trudy KTIPP
no.19:217-218 '58. (MIRA 12:12)
(Dresden--Mechanics, Applied--Study and teaching)

STABNIKOV, V.N.; MELENT'YEVA, I.S.

Efficiency of plates in distilling and rectifying apparatuses..
Spir. prom. 24 no.1:13-17 '58. (MIRA 11:3)
(Plate towers)

STABNIKOV, V.N.

Processing molasses at the "Gährungschemie" state plant in Dessau.
Spirt. prom. 24 no.2:8-10 '58. (MIRA 11:3)
(Dessau, Germany--Chemical industries) (Molasses)

STADNIKOV, V.M.

Sugar refinery in Delitzsch (German Democratic Republic). Sakh.
prom. 32 no.3:64-67 Nr '58. (MIRA 11:4)
(Delitzsch, Germany--Sugar industry)

ROMANKOV, P.G.; STABNIKOV, V.N.; MEDVEDEV, A.A.

Aleksandr Kirillovich Krupskii (1845-1911). Trudy LTI no. 46:3-16
'58. (MIRA 14:4)

(Krupskii, Aleksandr Kirillovich, 1845-1911)
(Chemistry, Technical)

CHERNOBYL'SKIY, Iosif Il'ich, prof., doktor tekhn.nauk; BONDAR', Alla Grigor'yevna, dotsent, kand.tekhn.nauk; GAYEVSKIY, Boris Antovich, dotsent, kand.tekhn.nauk; GORODINSKAYA, Sarra Abramovna, dotsent, kand.tekhn.nauk; LADIYEV, Rostislav Yakovlevich, kand.tekhn.nauk; TANANAYKO, Yuriy Martir'yevich, kand.tekhn.nauk; MIRGORODSKIY, Vasilii Timofeyevich, inzh.; STABNIKOV, V.N., prof., doktor tekhn.nauk, retsenzent; FURKER, P.Ya., red.

[Machinery and equipment of chemical industries; principles of theory and design] Mashiny i apparaty khimicheskikh proizvodstv; osnovy teorii i rascheta. Pod red. I.I.Chernobyl'skogo. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit.lit-ry, 1959. 462 p.

(MIRA 13:2)

(Chemical industries--Equipment and supplies)

STABNIKOV, Vsevolod Nikolayevich, prof.; POPOV, Vladimir Dmitriyevich, prof.; RED'KO, Fedor Akimovich, inzh.; ZHIGALOV, S.F., doktor tekhn.nauk, retsenzent, spetsred.; ROMANKOV, P.G., doktor tekhn.nauk, retsenzent; KHMEL'NITSKAYA, A.Z., red.; SOKOLOVA, I.A., tekhn.red.

[Processes and equipment of food industries] Protsessy i apparaty pishchevykh proizvodstv. Moskva, Pishchepromizdat, 1959. 584 p. (MIRA 13:2)

(Food industry--Equipment and supplies)

SOV/71-59-3-23/23

8(4)

AUTHOR: Stabnikov, V.N.

TITLE: Conference on Electric Methods of Processing Food (Konferentsiya po elektricheskim metodam obrabotki pishchevykh produktov)

PERIODICAL: Spirtovaya promyshlennost', 1959, Nr 3, p 48 (USSR)

ABSTRACT: In October 1958 a Conference on electric methods of processing food was held in the Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti (Kiev Technological Institute of Food Industry). The Conference was organized by the Institute and the GNTK (State Scientific Committee of the Council of Ministers of the USSR and the RSFSR). The Conference was attended by more than 350 participants from a number of Soviet Republics, including representatives from ministries, academies of sciences from numerous industries and from 43 scientific research institutes. There were 51 reports; as a result of the ensuing discussion, the Conference came to the following conclusions: To develop a new branch of technology - the electro-technology of food products. Special interest is to be devoted to electric

Card 1/3

Conference on Electric Methods of Processing Food

SOV/71-59-3-23/23

curing and utilization of infra-red rays, such as used in the processing of sardines, etc, in the Moscow Fish Combine. Possibilities should be followed up in designing infra-red installations using low-temperature radiation, operating on electricity and natural gas. The field of high frequency current offers great scope for interesting developments in its application to the food industry. Further development work is needed in the application of electro-contact methods, which has already been introduced in the bread baking industry. Research work should be continued in regard to processing methods by means of ionizing radiation, about the results of which no conclusive information is yet on hand. For full information pertaining to the work of the Conference and the actual state of development

Card 2/3

Conference on Electric Methods of Processing Food

SOV/71-59-3-23/23

APPROVED FOR RELEASE: 08/25/2000

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of electric methods for processing food products the author refers to the manuals "New Physical Methods of Processing Food Products" (Novyye fizicheskiye metody obrabotki pishchevykh produktov), published by GOSINTI (Moscow, Kuznetskiy Most, 21/5, room Nr 217). The resolutions of the Conference are to be published in the near future.

Card 3/3

STABNIKOV, V.N.; MURAVSKAYA, O.G.

Hydrodynamic conditions of bubbling in tray contacting apparatus.
Izv.vys.ucheb.zav.; pishch.tekh. no.5:108-116 '59. (MIRA 13:4)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti,
kafedra protsessov i apparatov.
(Plate towers)

STABNIKOV, V.N., doktor tekhn. nauk

New methods of wood preservation. Der. prom. 8 no.10:7-8 0 '59.
(MIRA 12:12)

(Wood--Preservation)

BELYAVSKIY, V.V.; KORCHINSKIY, A.I.; STABNIKOV, V.N.

Food industry in the seven-year plan (1959-1965). Trudy **KTIPP**
no.20:3-7 '59. (MIRA 13:12)

(Food industry)

STABNIKOV, V.

Conference on problems of the utilization of electricity
in the processing of food products. Sakh. prom. 33 no.4:75
Ap '59. (MIRA 12:6)
(Food industry--Congresses)

STABNIKOV, Vasilii Nikolayevich, doktor tekhn.nauk; LIVSHITS, Vladimir Yakovlevich, inzh.-khimik; KARPOV, V.V., kand.tekhn.nauk, nauchnyy red.; KAPLAN, M.Ya., red.izd-va; PUL'KINA, Ye.A., tekhn.red.

[Antiseptizing wood in construction] Antiseptirovanie drevesiny na stroitel'stve. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 102 p. (MIRA 13:4)
(Wood--Preservation)

GARBARENKO, V.G.; STABNIKOV, V.N.

Phase equilibrium in the system ethyl alcohol - water - vapor. *Izv.*
vys.ucheb.zav.: pishch.tekh. no.4:112-120 '60. (MIRA 13:11)

1. Kiyevskiy tekhnologicheskij institut pishchevoy promyshlennosti.
Kafedra protsessov i apparatov. (Phase rule and equilibrium)
(Ethyl alcohol)

MALEZHIK, I.F.; STAENIKOV, V.N.

Hydrodynamics of valve trays. Trudy KTIPP no.22:158-170 '60.
(MIRA 14:3)

(Plate towers)

STABNIKOV, V.N.; NIKOLAYEV, A.P.; TSYGANKOV, P.S.; GARBARENKO, V.G.

Hydrodynamic testing of turbogrid-type sieve plates. Trudy KTIPP
no.22:171-177 '60. (MIRA 14:3)
(Plate towers)

STABNIKOV, Vasilii Nikolayevich; MALKOV, D.E., inzh., nauchnyy red.; GRI-
GOR'YEVA, I.B., red. izd-va; VORONETSKAYA, L.V., tekhn. red.

[Carpentry] Dereviannye raboty; posobie dlia povysheniia masterstva
rabochikh i brigadirov. Leningrad, Gos. izd-vo lit-ry po stroit.,
arkhit. i stroit. materialam, 1961. 223 p. (MIRA 14:10)
(Carpentry)

POPOV, Vladimir Il'ich, prof.; DOBROSEDOV, Leonid Leonidovich; STABNIKOV,
Vsevolod Nikolayevich; ANDREYEV, Konstantin Petrovich; SOKOLOV,
A.Ya., prof., retsenzent; AZRIYELOVICH, S.S., kand.tekhn.nauk,
retsenzent; KHMEL'NITSKAYA, A.Z., red.; KISINA, Ye.I., tekhn.red.

[Technological equipment of fermentation industries] Tekhno-
logicheskoe oborudovanie predpriatii brodil'noi promyshlennosti.
Izd.4., perer. i dop. Moskva, Pishchepromizdat, 1961. 447 p.
(MIRA 15:5)

(Brewing industry—Equipment and supplies)
(Distilling industries—Equipment and supplies)

GANDZYUK, M.P.; STABNIKOV, V.N.

Investigation of certain types of bubblers. Izv. vys. ucheb. zav.;
pishch. tekhn. no.5:76-83 '61. (MIRA 15:1)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti.
Kafedra protsessov i apparatov.
(Food industry--Equipment and supplies)

GANDZYUK, M.P.; STABNIKOV, V.N.

Methods of determining the rate of dissolving in mixing with the
bubbling method. Trudy KTIPP no.24:120-129 '61. (MIRA 15:6)
(Mixing machinery--Testing)

MALEZHIK, I.F.; STABNIKOV, V.N.

Studying the efficiency of valve plates. Trudy KTIPP no.24:
130-138 '61. (MIRA 15:6)

(Distillation apparatus)

GARBARENKO, V.G.; STABNIKOV, V.N.

Coefficients of absorption of alcohol vapors in a packed tower.
(MIRA 15:6)
Trudy KTIPP no.24:145-151 '61.
(Distillation) (Packed towers)

STABNIKOV, V.N.

Modeling of distillation systems. Trudy KTIPP no.24:152-155
'61. (MIRA 15:6)

(Distillation apparatus--Models)

STABNIKOV, V.N.; YEGOROV, A.S.; VISNEVSKAYA, G.L.; MATYUSHA, A.G.

Efficiency coefficients of bubble-cap plates in the concentration
section of purifying columns. Spirt.prom. 27 no.3:7-10 '61.
(MIRA 14:4)

(Plate towers)

MALEZHIK, I.F.; STABNIKOV, V.N.

Distillation of alcohol-water mixture in a column with valve plates.
Spir. prom. 27 no. 3:14-18 '61. (MIRA 14:4)
(Plate towers) (Alcohol)

TSYGANKOV, P.S.; STABNIKOV, V.N., prof., red.

[New technological systems of beer rectification and
rectification apparatus; a survey] Novye tekhnologicheskie
skhemy bragorektifikatsionnykh i rektifikatsionnykh appara-
tov; obzor. Moskva, 1962. 58 p.
(MIRA 17:4)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy infor-
matsii pishchevoy promyshlennosti.

MALEZHIK, I.F.; STABNIKOV, V.N.

Hydraulic resistance of valve trays. Izv.vys.ucheb.zav.; pishch.-
tekh. 2:114-119 '62. (MIRA 15:5)

1. Kiyevskiy tekhnologicheskij institut pishchevoy promyshlennosti,
kafedra protsessov i apparatov.
(Distillation apparatus)

STABNIKOV, Vsevolod Nikolayevich; KUZNETSOV, N.M., retsenzent;
KAFAROV, V.V., retsenzent; KOVALEVSKAYA, A.I., red.;
KISINA, Ye.I., tekhn. red.

[Distillation and rectification of alcohol] Peregonka i
rektifikatsiia spirta. Moskva, Pishchepromizdat, 1962.
503 p. (MIRA 15:11)
(Distillation) (Distillation apparatus)

CHERNOBYL'SKIY, Iosif Il'ich, doktor tekhn. nauk, prof.; BONDAR',
Alla Grigor'yevna, kand. tekhn. nauk, dots.; GAYEVSKIY,
Boris Antonovich, kand. tekhn. nauk, dots.; GNATOVSKIY,
Vasiliy Ivanovich, kand. tekhn. nauk, dots.; GORODINSKAYA,
Sara Abramovna, kand. tekhn. nauk, dots.; IADIYEV, Rostislav
Yakovlevich, kand. tekhn. nauk; TANANAYKO, Yuriy Marter'yevich,
kand. tekhn. nauk, dots.; MIRGORODSKIY, Vasiliy Timofeyevich,
inzh.; STABNIKOV, V.N., doktor tekhn. nauk, prof., retsenzent;
SOROKA, M.S., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Machinery and apparatus of the chemical industry] Mashiny i ap-
paraty khimicheskoi promyshlennosti. Pod red. I.I. Chernobyl'-
skogo. Moskva, Mashgiz, 1962. 521 p. (MIRA 16:2)
(Chemical engineering--Equipment and supplies)

STABINIKOV, Vsevolod Nikolayevich; KAFAROV, V.V., retsenzent;
KUZNETSOV, N.M., retsenzent; KOVALEVSKAYA, A.I., red.;
KISINA, Ye.I., tekhn. red.

[Distillation and rectification of alcohol] Peregonka i rek-
tifikatsiia spirta. Moskva, Pishchepromizdat, 1962. 503 p.
(Distillation) (MIRA 16:7)

STABNIKOV, V. N.

"Theory and calculation of distillation and rectification" by
S. A. Bagaturov. Reviewed by V. N. Stabnikov. *Izv. vys. ucheb.*
zav.; pishch. tekhn. no. 5:151-152 '62. (MIRA 15:10)

(Distillation) (Bagaturov, S. A.)

GEKKER, Inna Yevgen'yevna, kand. tekhn.nauk; STABNIKOV, V.N., doktor
tekhn. nauk, prof., retsenzent; LOVACHEV, L.N., kand. tekhn.
nauk, retsenzent; MASLOVA, Ye.F., red.; VOLKOVA, V.G.,
tekhn. red.

[Processes and apparatus of food industries] Protsessy i ap-
paraty pishchevykh proizvodstv. Moskva, Gostorgizdat, 1963.
290 p. (MIRA 16:8)

(Food industry)

(Food machinery)

ANISTRATENKO, V.A.; STABNIKOV, V.N.

Hydrodynamics of dry scaly type plates of the mass transfer columns.
Izv.vys.ucheb.zav.; pishch. tekhn. no.3:143-150 '63. (MIRA 16:8)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti,
kafedra protsessov i apparatov.
(Distillation apparatus) (Mass transfer)

STABNIKOV, V.N.; ANISTRATENKO, V.A.

V.V.Kafarov: Fundamentals of mass transfer. Izv.vys.ucheb.zav.;
pishch. tekhn. no.3:174-176 '63. (MIRA 16:8)
(Mass transfer)

DEVYATKO, V.I.; STABNIKOV, V.N.

Investigating the experimental data on the equilibrium of
the system ethanol-water under atmospheric pressure. Izv.
vys. ucheb. zav.; pishch. tekhn. no.4:120-122 '63.

(MIRA 16:11)

1. Kiyevskiy tekhnologicheskii institut pishchevoy
promyshlennosti, kafedra vysshey matematiki i kafedra
protssessov i apparatov.

STABNIKOV, V.N.

Training of engineers for the food industry in France.
Izv. vys. ucheb. zav.; pishch. tekhn. no.4:159-160 '63.
(MIRA 16:11)

DEVYATKO, V.I.; STABNIKOV, V.N.

Equation of elasticity of the ethyl alcohol vapor. Izv. vys.
ucheb. zav.; pishch. tekhn. no.6:117-120 '63.

(MIRA 17:3)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promysh-
lennosti, kafedra vysshey matematiki i kafedra protsessov i
apparator.

ANISTRATENKO, V.A.; STABNIKOV, V.N.

Hydraulics and mass transfer characteristics of the spray plates
of mass transfer columns. Izv.vyssh.ucheb.zav.; pishch.tekh.
no.1:128-135 '64.

(MIRA 17:4)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlennosti,
kafedra protsessov i apparatov.

ANISTRATENKO, V.A.; STABNIKOV, V.N.

Mass transfer characteristics of spray plates. Izv.vys.ucheb.zav.;
pishch.tekh. no.1:135-142 '64. (MIRA 17:4)

1. Kiyevskiy tekhnologicheskij institut pishchevoy promyshlennosti,
kafedra protsessov i apparatov.

DANILKO, G.V.; YEGOROV, A.S.; STABNIKOV, V.N., prof., nauchnyy konsul'tant

Use of ion exchange resins for removal from the alcohol of
impurities inseparable during the rectification. Trudy UkrNIISP
no.9:59-71 '64.
(MIRA 17:10)

ANISTRATENKO, V.A. [Anistratenko, V.G.]; STABNYKOV, V.N. [Stabnykov, V.M.]

Hydrodynamic and mass transfer characteristics of the spray plates
of fractional and absorption apparatus. Khar. prom. no. 2:54-56 Ap-
Je '65. (MIRA 18:5)

STABNIKOV, Vsevolod Nikolayevich; BARANTSEV, Vasilii Ivanovich;
MAL'SKIY, A.N., prof., retsenzent; LAZAREV, I.A., inzh.,
retsenzent; KHMEL'NITSKAYA, A.Z., red.

[Processes and apparatus of food processing industries]
Protsessy i apparaty pishchevykh proizvodstv. Moskva,
Pishchevaia promyshlennost', 1965. 390 p.

(MIRA 18:8)

PETROVA, R.S., kand. pedagog. nauk; STABNIKOV, V.N., doktor tekhn. nauk

Generalized formulas for determining the specific heat
and viscosity of water-alcohol solutions. Pis'ma. prom.
no.1:151-158 '65. (MIRA 18:11)

DEVYATKO, V.I., kand. fiz.-mat. nauk; STABNIKOV, V.N., doktor tekhn.
nauk

Equilibrium equation for the system ethanol-water. Pisheh.
prom. no.1:176-178 '65.
(MIRA 18:11)

DEKARETSKIY, V.A., inzh.; STABNIKOV, V.N., prof.

Effect of the temperature of the charge on the process of
distillation. Pishan. prom. no.2:153-164 '65.

(MIRA 18:11)

1. Kiyevskiy tekhnologicheskii institut pishchevoy promyshlen-
nosti.

1114-05 EWT(d)/EWP(1) Pc-4/Pq-4/Pg-4/Pk-4/Pl-4 IJP(c) GS/BC
ACCESSION NR: AT5003621 S/0000/64/000/000/0188/0201

AUTHOR: Zhandarov, M. Ye.; Korotkov, S. V.; Myasnikov, V. A.;
Pivovarov, V. T.; Stabnikova, G. V.; Tarasenko, Ye. V. 300
B+

TITLE: Experimental outfit for studying combined digital servos with a harmonic input signal

SOURCE: AN SSSR, Institut elektromekhaniki. Avtomatizirovanny elektroprirod (Automated electric drive). Leningrad, Izd-vo Nauka, 1964, 188-201

TOPIC TAGS: servo, servo system, digital servo system

ABSTRACT: The outfit consists of a special computer and an executive system. The computer comprises two semiconductor integrators with a parallel carry of integrand and a high-speed carry of overflow units. Each integrator (described elsewhere) includes a reversible counter and a storage unit. The integrators are connected for yielding the increments $\Delta \sin \omega t$ and $\Delta \cos \omega t$, i.e., the increments

Card 1/2

L 34114-65

ACCESSION NR: AT5003621

of coordinates of a point that travels along a circle. The sine function is generated with an accuracy up to the 20th binary digit. Also, the means for computing a time-derivative of angle are provided. A principal circuit diagram of the outfit is explained in some detail. The combined digital servo system consists of a coordinate servo and a rate (or speed) servo. Information about coordinate $\sin \omega t$ and its rate of change $\cos \omega t$ comes from the computer and is fed into the corresponding servos. The coordinate information appears periodically; the rate, continuously. The outfit permits investigating two-motor "angle-angle" servos as well as two- and single-motor "angle-rate" servos. Orig. art. has: 8 figures, 12 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 08Jul64

ENCL: 00

SUB CODE: DP, IE

NO REF SOV: 009

OTHER: 000

Card 2/2

5(3)

AUTHORS:

Yelagina, N. V., Stabnikova, T. V., Kazanskiy, B. A.,
Academician

SOV/20-124-6-17/55

TITLE:

Synthesis of 6,9-Endomethylene-Spiro-(4,5)-Decane (Sintez
6,9-endometilenspiro-(4,5)-dekana)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 6,
pp 1243 - 1246 (USER)

ABSTRACT:

By means of the diene-condensation of 2-methylene cyclohexanone-1 with cyclopentadiene an unsaturated spirane ketone- 1,4-endomethylene-spiro-(5,5)-undecene-2-one-7 (I) is formed (Ref 1). This compound was transformed into a tricyclic spirane hydrocarbon-1,4-endomethylene-spiro-(5,5)-undecane (II). In the present paper the authors used the initially mentioned diene-condensation for the synthesis of another representative of the substance (III) mentioned in the title. By means of the reaction of 2-methylene-cyclopentanone-1 (IV) with cyclopentadiene (V) an unsaturated spirane ketone was produced: 6,9-endomethylene-spiro-(4,5)-decene-7-one-1 (VI). As 2-methylene cyclopentanone-1 (IV) tends to polymerize, the Mannich-base (Mannikh) was introduced into the reaction, i.e. 2-(N-dimethyl

Card 1/2

Synthesis of 6,9-Endomethylene-Spiro-(4,5)-Decane

SOV/20-124-6-17/55

aminomethyl)-cyclopentanone-1 (VII) which in the course of reaction decomposed into 2-methylene-cyclopentanone-1 and a secondary amine. By means of the catalytic dehydrogenation of the ketone (VI) in the presence of Reney nickel at a low temperature 6,9-endomethylene-spiro-(4,5)-decanone-1 (VIII) was produced. By the action of hydrazine hydrate (VIII) was transformed into hydrazone (IX). The latter was catalytically decomposed according to N. M. Kizhner. The substance obtained as mentioned in the title is a colorless, mobile liquid, with a terpene-like smell and with a boiling point of 83°/12 mm. The experimental part furnishes the usual data. There are 2 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: December 3, 1958

Card 2/2

STABNIKOVA, V. P.

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Sugar, Starch, and Gums

①
Iodometric method for determination of sucrose in sugar
beets. V. P. Stabnikova. *Trudy Leningrad Tekhnol.
Inst. Pishchev. Prom.* 1(X), 29-40(1949).—In normal
beet roots polarimetric and iodometric methods coincide in
results. However, in damaged beets the polarimetric
method always showed higher sucrose than the iodometric
method. Iodometric method is completely developed and
described with auxiliary tables. V. B. Balkov

SHAVROV, I., general-mayor tankovykh voysk; KAZARYAN, A., general-mayor;
PRYTKOV, A., gvardii podpolkovnik; MIKHALEV, S., podpolkovnik;
~~STABRONIK, A., podpolkovnik~~; SHIPUNOV, A., gvardii podpolkovnik;
UROVSKIY, P., starshiy leytenant; KUDINOV, P., podpolkovnik
PETROV, N., polkovnik; PRIBOYCHENKO, G., general-mayor zapasa;
SHCHERBAK, G., general-mayor tankovykh voysk; DUDAREV, I., general-
mayor v otstavke; MIKHEYEV, N., podpolkovnik

We discuss projects of new general army regulations. Voen. vest. 38
no.9:2-12 S '58.

(MIRA 11:9)

(Russia--Army--Regulations)

POLLYAK, V.V.; GRICHEVSKAYA, R.I.; STABROVSKAYA, P.A.

Using luminiscent indicators for the study of surface flow of the
glass batch in tank furnaces. Trudy VNIISTekla no.37:44-49 '57.

(Glass manufacture)

(MIRA 11:1)

(Luminescent substances)

STABROVSKAYA, V. E.

✓ 1425. Chemical composition and parasitocidal activity. XVII.
The influence on antimalarial activity of the substitution of a diethyl-
amino group in the cyclic side chain in cyclic amines (in compounds
of the quinoline and acridine series). V. E. Stabrovskaya *Zh. obshch.
Khim.*, 1953, 25, 821—827; *Referat. Zh. Biol.*, 1956, Abstr. No.
52028. — A report on the synthesis and properties of a series of
highly active antimalarial quinoline and acridine compounds in
which the diethylamino group is substituted in the cyclohexyl or
 α -methylpyrrolidine. Introducing aniline in place of the diethyl-
amino group destroyed the antimalarial action. (Russian)
A. D. THORNTON-JONES

100 AND 4TH CROISS

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

4

Electrolytic brass plating. A. I. Stalovskii U.S.S.R.
 66,903, Aug 31, 1940. To the bath is added 20 g per l. of
 $\text{Na}_2\text{C}_2\text{O}_4$ together with gelatin. M. H.

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL DIVISION

RESEARCH DIVISION

100 AND 4TH CROISS

CHAPMAN, A. I.

Chem. Tech. Sci.

Dissertation: "Electrolytic Electroplating From Solutions without Cyanogen." Moscow Inst of Nonferrous Metals and Gold under M. I. Kalinin, 8 Dec 47.

CC: Vechnaya Pamyat, Dec, 1947 (Project #17036)

Electrolytic brass plating of steel for subsequent coating with rubber. A. I. Stalauvskii: *Zh. Prikl. Khim.* (J. Applied Chem.) 23, 370-1 (1950). - Best adhesion of rubber is obtained with brass coatings contg. 60.7-73.7% Cu. With such coatings, a load of 19.7 kg./sq. cm. tears the rubber rather than tearing it off the brass. The adhesion between the rubber and the brass coating does not change with the thickness of the latter, between 1 and 5 μ . Suitable brass coatings are produced in baths contg. 20.0 g./l. Cu (in the form of $\text{CuSO}_4 \cdot \text{Cu}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}$) 10.00 g./l., 5.0 g./l. Zn (ZnO 6.23 g./l.), 8-10 g./l. free NaCN (total NaCN 70.50 g./l.), 0.25 g./l. NH_4 (25% NH_4OH soln. 1.0 g./l.), pH 10.5-11.5, temp. 28-30°, c.d. 0.4 am./sq. dm., length of electrolysis 30 min. (cf. deal with N. Thon

STABROVSKIY, A. I.

191T19

USSR/Chemistry - Electroplating

Jul 51

"Electrolytic Brass-Plating From Cyanide-Free Solutions," A. I. Stabrovskiy

"Zhur Obshch Khim" Vol XXI, No 7, pp 1223-1229

Investigated combined deposition of Zn and Cu from complex ions in solns with chlorides, thiocyanates, thiosulfates, oxalates, pyrophosphates, ammonia, and sulfates. Studied individual potentials of Cu and Zn in these solns and quality of coatings. Obtained most satisfactory coatings from oxalate bath or alk bath contg glycerine.

191T19

STABROVSKIY, A. I.

183T34

USSR/Chemistry - Electroplating

May 51

"Electrolytic Brass Plating in an Oxalate Bath,"
A. I. Stabrovskiy

"Zhur Prik Khim" Vol XXIV, No 5, pp 471-476

Study showed possibility of replacing cyanide bath with oxalate bath (nonpoisonous, more stable in open air) for electroplating Cu and Zn jointly. With small gelatin admixt, oxalate bath has good throwing power and produces brass coating suitable for protection of iron from corrosion and for application to surface to which rubber is to be bonded.

183T34

7

CA.

Electrolytic brass plating in an oxalate bath. A. I.
Stabrovskii. *J. Applied Chem. U.S.S.R.* 24, 515-20
(1951) (Engl. translation). -- See C.I. 46, 5481c. B. R.

STALOVEN, A. I.

Electrolytic brass-plating from cyanide-free alkaline solutions. A. I. Staloven, *J. Appl. Chem. U.S.S.R.* 25, 1031-7(1952)(in English); *Zhur. Priklad. Khim.* 25, 968-73(1952); cf. C.A. 47, 3718h.—An investigation of complex Cu and Zn salt solns. showed that in a strongly alk. soln. only Cu gave a complex combination with glycerol, while Zn in the same soln. was found to be in the form of a zincate complex. With an increase in c.d. the cathodic Cu polarization increased to a greater extent than the cathodic Zn polarization. As the result, the discharge potentials of the metals deposited from alk. soln. were in such proximity that their joint deposition on the cathode would proceed at a relatively low c.d. The electrolysis of a mixed soln. of cupriglycerate and zincate complexes formed brass deposits on the cathode, with Cu content 50-85%, or of 27.2-33% (white brass), depending upon the electrolyte compn. and the c.d. The properties of brass plates indicated that the cathode white-brass deposits were quite similar in compn. and properties to brass plates from cyanide baths. However, deposits of 50-85% Cu content were chemically less stable than were deposits from cyanide baths, which pointed to some obscure structural form for these deposits.

Charles M. Mason

STANROVSKIY, A. I.

ELECTROLYSIS

Electrolytic brass sputing without the use of cyanides. Zhur. fiz. khim. 26, no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

5-5400
5.2200(A)

69014

AUTHOR:

Stabrovskiy, A. I.

S/078/60/005/04/009/040
B004/B007

TITLE:

The Polarography of Uranium Compounds
in Carbonate- and Bicarbonate Solutions. The Reduction Waves of
the Complex Carbonate Ions of Uranyl 1

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, pp 811 - 820
(USSR)

ABSTRACT:

It was the aim of this paper to study the behavior of complex carbonate compounds of uranium of different valences. The experiments were made by means of a Heyrovsky polarograph of the type V-301. In calculations, equations by Heyrovsky and Il'kovich were used. The electrolyzer is shown in figure 1. Figure 2 shows the polarograms with cathodic polarization of the drop electrode in ammonium carbonate solutions, which contained

$9.13 \cdot 10^{-4}$ M/l U(VI) (temperature 25°). Figure 3 shows the polarograms in NaHCO_3 - and Na_2CO_3 solutions. The wave of the first reduction of U(VI) to U(V) occurs with a half-wave potential of from -0.7 to -0.9 v in all cases, and the wave of the second reduction to U(IV) (-1.3 to -1.4 v) only under conditions which do not promote the hydrolysis of the complex carbonate ions of U(V) (low temperature). Table 1 shows the influence exerted by the

Card 1/3

69014

The Polarography of Uranium Compounds in Carbonate-
and Bicarbonate Solutions. The Reduction Waves of the
Complex Carbonate Ions of Uranyl

S/078/60/005/04/009/040
B004/B007

concentration of Na_2CO_3 , NaHCO_3 , and $(\text{NH}_4)_2\text{CO}_3$ upon the diffusion limiting current and upon the half-wave potential of the reduction of the complex carbonate ions of U(VI). Figure 4 shows the curves amperage - voltage for polarization in an ammonium carbonate solution for concentrations of U(VI) between $9.13 \cdot 10^{-5}$ M/l and $1.44 \cdot 10^{-3}$ M/l. The second reduction wave develops only at high U(VI) concentrations, and has a maximum which is explained on the basis of the reaction equations (2) and (3) by the formation of UO_2 , decrease of hydrogen overextension and liberated hydrogen. 4

Table 2 shows the influence exerted by the concentration of U(VI) upon the diffusion limiting current and upon $1/\text{tga}$ of the wave of the first and second reduction. The limiting current of the first wave depends on the composition of the solution. It increases with increasing carbonate and bicarbonate concentration. Its potential, on the other hand, decreases with increasing concentration of the carbonates and of U(VI). The limiting current of the second wave is influenced by hydrolysis of the complex carbonates of U(V). The authors found that under the experimental

Card 2/3

69014

The Polarography of Uranium Compounds in Carbonate-
and Bicarbonate Solutions. The Reduction Waves of the
Complex Carbonate Ions of Uranyl

S/078/60/005/04/009/040
B004/B007

conditions chosen, U(IV) is not produced on the dropping mercury electrode, but that it is readily oxidized to U(VI) (Table 3). Figure 5 shows the polarogram for U(IV). The potential of the half-wave changes from +0.031 to +0.094 v in dependence on the pH and the composition of the solution. In the bicarbonate solutions of sodium and ammonium maxima occur (Fig 6), which are explained by hydrolysis. If U(VI)- and U(IV)-ions are introduced into a sodium carbonate solution, they enter into interaction forming U(V)-ions. (Polarograms: Figures 7,8, Table 4). The electrodic oxidation of U(V) and the reduction of U(VI) are irreversible. The complex carbonates of U(VI), U(V), and U(IV) are hydrolyzed in carbonate- and bicarbonate solutions, where the hydrolyzed forms of the U(V)- and U(IV)-complexes are no longer reducible, but are readily oxidized. There are 8 figures, 4 tables, and 4 references, 1 of which is Soviet. 4

SUBMITTED: April 14, 1958

Card 3/3

YELOVSKIKH, N.N.; STABROVSKIY, A.I.

Mixed ammonium-sodium carbonate compounds of uranyl. Zhur.neorg.-
khim. 6 no.6:1300-1301 Je '61. (MIRA 14:11)
(Uranyl compounds)